# Wisconsin's GREAT LAKES!

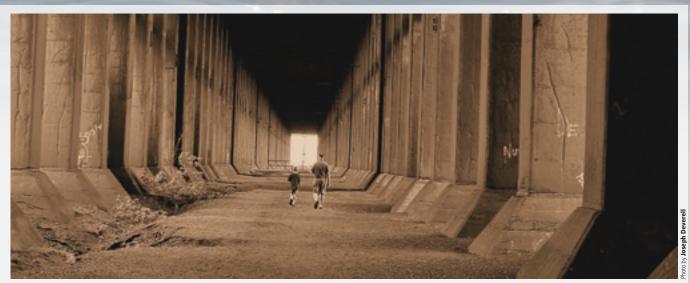
# 2013-2014 CALENDAR

Wisconsin Department of Natural Resources I Office of the Great Lakes



# Wisconsin's GREAT LAKES!

"If there is magic on this planet, it is contained in water." - Loren Eiseley



**The Ashland Ore Dock** was one of our most popular subjects in this year's Wisconsin's Great Lakes photo contest. The ore dock is a bittersweet reminder of times gone by and of our historic and continued dependence on Lake Superior and Lake Michigan. In Wisconsin, shipping, manufacturing, brewing, power production, recreation and tourism owe their success to our Great Lakes and their tributaries.

#### Lake Michigan and Lake Superior provide:

- Sport fishing opportunities for more than 250,000 anglers, bringing \$252 million to lakeshore communities annually.
- The foundation for a \$3 billion tourism industry in lakeshore counties.
- Water vital for manufacturing.
- Harbors and marinas that support a \$9.4 billion per year recreational boating industry.
- A maritime transportation network linking the heartland to markets throughout the world.

Climate change, nonpoint source pollution from cities and agricultural areas, toxic sediments, invasive species, and habitat loss threaten our Great Lakes and their economic value. The Brookings Institute reported in 2007 that the restoration of the five Great Lakes could bring at least \$50 billion in economic benefits to the region. Thanks to recent federal funds, we have made great strides in the protection and restoration of Lake Michigan and Lake Superior.

Our Great Lakes are vast and beautiful and they are also a vital economic engine for our state and region. The continued restoration and protection of these valuable resources is essential if we are to maintain our economy and quality of life.



Built in 1916, the Central Ore Dock was the third of five ore docks that once stood in Ashland, Wisconsin. Iron ore became the dominant trade of the Great Lakes region in 1888 and Ashland became the port of choice for the Gogebic mines. Iron ore was transported by rail and loaded in freighters at the five ore docks. The Central Ore Dock was constructed of wood and cement and supported by 6,800 piles. It was 1,900 feet long with 1,000 feet of timber trestle supporting four rail tracks. Ore from trains was deposited in 314 pockets where it slid down chutes or "spouts" that could be lowered to fill a freighters's hull. While little remains of Ashland's last ore dock, many people will carry memories and tales of this massive structure and the industry it helped to support.







Wisconsin DNR's Office of the Great Lakes is pleased to present our sixth annual Wisconsin's Great Lakes calendar. We hope this calendar will be a daily reminder of how magnificent Wisconsin's Great Lakes are and how we can all help protect them.

Photographers from Wisconsin and beyond submitted nearly 500 beautiful photos for this year's contest. Wisconsin authors contributed eleven lovely and diverse writing submissions to our Great Lakes Writing Project. The photos and writings clearly show that Lake Michigan and Lake Superior are among Wisconsin's most scenic and beloved natural resources.

#### Thank you to all 2013 photographers and authors for sharing your talent with us!

Visit the Office of the Great Lakes website to see more photos and writing submissions.

**dnr.wi.gov** (search *Photo Submissions*)

#### THE WISCONSIN DNR IS ON:

www.facebook.com/WIDNR



twitter.com/WDNR







"Wisconsin's Great Lakes are critical to our economy and quality of life. A rich diversity of businesses and industries from shipping and power production to brewing and paper manufacturing — rely on the waters of Lake Michigan, Lake Superior and their tributaries. Continued care of these resources will help ensure the economic well-being of our state for generations to come."

- Governor Scott Walker





"Wisconsin is bordered by two of the world's largest lakes — Lake Superior to the north and Lake Michigan to the east. Many Wisconsin cities and towns prosper along the shores and tributaries of these lakes where we enjoy the benefits of their waters, beauty and bounty. Commercial and sports fishing, tourism and recreation flourish in our coastal towns and help fuel Wisconsin's economy. With continued focus on health and sustainability, these magnificent resources will continue to help sustain our economy and quality of life."

- Cathy Stepp, DNR Secretary



#### 2014 "Wisconsin's Great Lakes" Photo Contest

Send us your best photos of Lake Michigan or Lake Superior. We're looking for beautiful shorelines, kids and adults enjoying the lakes, cultural and historic aspects of the lakes, people involved in lake protection or restoration, and businesses and industries that rely on Wisconsin's Great Lakes. Winning photos will be used in the 2014-2015 Wisconsin's Great Lakes calendar and in other DNR publications, presentations, websites and displays. Photo submission deadline is February 1, 2014. Photos in all seasons are needed!

**Entry Categories** (limit three photo entries per individual):

- 1. People enjoying Wisconsin's Great Lakes. Images of people fishing, canoeing, sailing, playing on the beach, etc.
- 2. Natural features and wildlife. Great Lakes shorelines, wetlands and tributaries, fish and other wildlife.
- 3. Historic and cultural features. Lighthouses, harbor towns, festivals, and businesses/industries that rely on our Great Lakes.
- 4. Lake protection activities. Storm drain stenciling, beach clean-ups, sturgeon guards, habitat restoration, research, etc.

#### Rules:

- 1. The contest is open to anyone. Photos must be submitted electronically.
- 2. Attach each photo (jpeg format) to a separate e-mail.
- 3. In each e-mail, please include the photo title, where in Wisconsin the photo was taken, the entry category, your name, e-mail address, mailing address and phone number.

- 4. Photos must be high resolution, horizontal in orientation, and taken in Wisconsin.
- 5. The Wisconsin DNR reserves the right to use an electronic or print copy of any image entered in the contest for non-commercial educational or promotional use with credit to the photographer. For example, prints may be used for DNR displays, slide shows, videos, publications and website.

#### Judging:

Photos will be judged by a panel of Wisconsin DNR staff. Criteria for judging will include creativity, visual and technical merit, and composition.

#### **Awards and Prizes:**

Winning photographs will be included in the 2014 - 2015 Wisconsin's Great Lakes calendar. Winning photographers will be contacted by mail, phone or e-mail and will receive the calendar by mail.

E-mail photos and entry information to: **DNRGreatLakesPhotoContest@wisconsin.gov**.

#### "Wisconsin's Great Lakes" Writing Project

Is your talent writing? Send us your original Great Lakes quote, essay, poem, song or rap. Help get the word out about how great Wisconsin's Great Lakes are. Share your favorite writings with us and you may find your words on our website, calendar, publications and displays! (All authors will be credited.) Deadline February 1, 2014.

E-mail writings to: DNRGreatLakesWriting@wisconsin.gov.



## ABOVE: "Fire Tug John Purves" by **SCOTT PEARSON**Let Place Wisconsin's Working Let

1st Place – Wisconsin's Working Lakes Sturgeon Bay, WI

## **The Working Great Lakes** by **Karen Gersonde**

The Great Lakes are mighty lakes, tough lakes, working lakes.

For centuries, wooden schooners, fishing boats, car ferries, ore carriers and cargo ships have braved the demanding waters of Lake Michigan and Lake Superior, carrying people and cargo of all types to distant ports of call on their routes.

In the early days, villages sprung up on their fertile shores, depending on these lakes for survival. Then villages became small cities, and the small cities became large cities. Businesses and industries thrived because of these lakes. All people through the ages depended on these lakes, on these boats and ships for food, raw goods, transportation, fish and other items like Christmas trees and lumber. Shipping was their life line, shipping was their survival.

America still depends on these lakes for the same reasons the early settlers did. We need to protect these lakes and maintain their integrity so they stay Great Lakes, Working Lakes, Mighty Lakes, for generations to come.

Background Photo by **Karin C. Frisque** Photo by **Philip Schwarz** 

# September 2013

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6	7
		Labor Day		Rosh Hashanah Begins at Sundown	•		
5	8	9	10	11	12	13	14
						Yom Kippur Begins at Sundown	
	15	16	17	18	19	20	21
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	29	30			**************************************		S M T W T F S  1 2 3 4 5  1 2 3 4 5  1 1 2 3 4 5  1 1 2 3 4 5  1 1 2 3 4 5  1 1 2 3 4 5  1 1 2 3 4 5  2 2 3 2 4 2 5  2 2 2 3 2 4 2 5  3 2 2 2 3 2 4 2 5  3 2 2 3 3 3 1  3 3 4 5  3 4 5  3 5 6 7 8 9 10 11 12  4 5 7 8 9 10 17 18 19  5 7 8 9 3 0 3 1



# October 2013

#### A Silver Lining

Every cloud has a silver lining and Super-storm Sandy was no exception. On the East Coast Sandy battered the shores, but on Lake Michigan the waves were just right for surfers — experienced surfers at least!

Give Wisconsin surfing a try or just try out the lingo. Here are a few terms to get you started:

"Jazz the Glass" — Ride the waves.
"Amped" — Really charged up, stoked, psyched. It's on!

"Boggas" – A totally outrageous wave.
"Frothin" – Australian for when a surfer is shredding, ripping, having a good session.

For more surf lingo, check out the Riptionary at **riptionary.com** 

Surf Wisconsin! Visit Sheboygan for its annual Dairyland Surf Classic: **www.visitsheboygan.com** (search *Surfing*)

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			Photo by <b>Robert G. Stromberg</b>	2	3	4	5
	6	7	8	9	10	11	12
Sales Parameter	13	14 Columbus Day	15	16	17	Clean Water Act Signed in 1972	19
	20	21	22	23	24	25	26
The same	27	28	Great Lakes Restoration Initiative Approved by Congress in 2009	30	31 Halloween	SEPTEMBER 2013  S M T W T F S  1 2 3 4 5 6 7  8 9 10 11 12 13 14  15 16 17 18 19 20 21  22 23 24 25 26 27 28  29 30	NOVEMBER 2013  S M T W T F S  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Wisconsin's GREAT LAKES!

Photo by John V. Beinecke



# November 2013

#### Shipping

Two types of ships sail the waters of the Great Lakes. "Salties" travel the oceans and into the lakes through the St. Lawrence Seaway. "Lakers" are fresh water only and travel between Great Lakes ports. The lakers include 57 U.S. Flag ships — self-propelled vessels and tug/barge units that range from 494 feet to over 1,000 feet in length. These huge vessels transport more than 115 million tons of cargo each year, including iron ore, limestone, coal, cement, salt, sand and gypsum. More than \$7 billion worth of cargo passes through Wisconsin ports each year.

These self-unloading vessels can discharge 70,000 tons of iron ore or coal in less than 10 hours without the help of shore workers or equipment. And ships are surprisingly "green," having the smallest carbon footprint of any major mode of transportation. Ships can travel an astonishing 607 miles on one gallon of fuel per ton of cargo. Trains travel 202 miles and trucks 59 miles on one gallon of fuel per ton of cargo. And it would take 7 trains each pulling 100 cars or 2,800 trucks to carry the same cargo as a 1,000-foot Laker!

ı	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
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I	Daylight Savings	4	5	6	7	8	9
	10	<b>1 1</b> Veteran's Day	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27  Hanukkah Begins at Sundown	28 Thanksgiving Day	29	30



# December 2013

#### **Milwaukee Returns to Its Rivers**

People have been drawn to the confluence of the Kinnickinnic, Menomonee and Milwaukee Rivers for thousands of years and Milwaukee grew up along their shores. Abundant water was — and still is — critical to industry, brewing, transportation and recreation in this area. Unfortunately, some industries as well as years of runoff from farm fields and cities, left behind a legacy of pollution that severely restricted uses of the rivers and still affects sections of the rivers and harbor today.

Recent federal funding and the efforts of state and local agencies, conservation organizations and businesses are breathing new life into these important resources. Milwaukee locals and visitors are once again returning to the shores.

Learn more by watching our short videos about the Milwaukee River AOC in the "Great Lakes News" playlist at www.youtube.com/user/WIDNRTV

Explore Milwaukee's great urban water resources:

**dnr.wi.gov** (search *Lake Michigan Water Trail*)

**dnr.wi.gov** (search *Hank Aaron State Trail*)

**dnr.wi.gov** (search *Lakeshore State Park*)

Urban Ecology Center: urbanecologycenter.org

Milwaukee River Urban Water Trail:

milwaukeeriverkeeper.org/ content/milwaukee-urbanwater-trail

1	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6	7
		•					
1	8	9	10	11	12	13	14
1							
1	Great Lakes Compact Enacted in 2008				Great Lakes Restoration Strategy Released in 2005	Great Lakes Compact Signed by Governors in 2005	
	15	16	17	18	19	20	21
			$\circ$				Winter Begins
200	22	23	24	25	26	27	28
				Christmas Day	Kwanzaa Begins		
	29	30	31	-	-	NOVEMBER 2013 S M T W T F S	JANUARY 2014 S M T W T F S
				D. I	11111 percenti	3 4 5 6 7 8 9 10 11 12 13 14 15 16	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
			New Year's Eve	A seem to all light	All Landshiller	<b>B</b> 10 11 12 13 14 15 16 <b>B</b> 17 18 19 20 21 22 23 <b>B</b> 24 25 26 27 28 29 30	19 20 21 22 23 24 25 26 27 28 29 30 31



ABOVE: "Frozen Harbor" by **HENRY BERRY** Lake Superior

#### **Brewing**

Wisconsin's first commercial brewery opened its doors in the 1940s. Since the production of beer requires a large volume of high quality water, breweries sprung up along Wisconsin's major rivers, many of them Great Lakes tributaries. One hundred years ago, Wisconsin was the beer capitol of the world, but by 1982, only seven breweries remained. The 1990s saw a huge increase in micro (craft) breweries making Wisconsin a paradise for beer enthusiasts.

Craft brewers care about water and they are going to great lengths to decrease the amount of water needed to produce a barrel of beer. Green Tier breweries in Wisconsin have driven the water to beer ratio down to 3:1. Historically that ratio was much higher, in some cases as high as 60:1.

# wisconsin's Green Tier breweries include Central Waters Brewery (Amherst), Lakefront Brewery (Milwaukee), Capital Brewery (Madison), New Glarus Brewery (New Glarus), and Milwaukee Brewing Company (Milwaukee). Green Tier also includes Briess Malt & Ingredients, the largest maltster of specialty grains for craft breweries. Learn more at: dnr.wisconsin.gov (search Brewing)

# January 2014

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			The least color   The least	New Year's Day	2	3	4
	5	6	7	8	9	10	11
00 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 /	12	13	14	15	16 Soo Locks Close to Ships	17	18
	19	20 Martin Luther King Day	21	22	23	24	25
The state of the s	26	27	28	29	30	31 Chinese New Year	FEBRUARY 2014  S M T W T F S  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28



ABOVE: "Apostle Islands Sled Dog Race" by **PHILIP SCHWARZ** 

2nd Place – People Enjoying Wisconsin's Great Lakes Bavfield, WI

#### **Power Generation**

Wisconsin uses more than 7 billion gallons of water each day and about 80% of it is used for electric power production. Our fossil fuel power plants use about 4 billion gallons and the state's two nuclear power plants use about 2 billion gallons each day. The average annual electric power production of utilities in the Great Lakes basin over the last ten years has been about 34,900,000 MWH (one MWH, megawatt-hour, is equivalent to the total amount of electrical energy produced by a power plant that can power about 330 homes in one hour).

Most of the water is used for cooling and almost all of the water comes from our surface waters. The median consumptive use of water for electric power generation in the Great Lakes basin (water not returned to surface waters) is estimated to be about 2% of the total amount of daily water used. Withdrawal and consumption rates depend on the system used:

- Once Through water is returned to the source. High withdrawal and low consumption.
- Closed water is recycled. Low withdrawal/higher consumption due to evaporation (but less used overall).
- Dry Cooling air is used instead of water. Water use decreased by 95%. but higher cost and lower efficiency.

To learn more:

**dnr.wi.gov** (search *Energy Sector*)

Wisconsin State Energy Office energyindependence.wi.gov

Wisconsin Public Service Commission psc.wi.gov/consumerInfo/index-

consumer.htm

Wisconsin's Focus on Energy www.focusonenergy.com/#

# February 2014

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			S   M   T   W   T   F   S				Photo by <b>Holly Gertz</b>
	2	3	4	5	6	7	8
State of the state	9	10	11	12	13	14 Valentine's Day	15
STANDARD STA	16	17 President's Day	18	19	20	21	22
	23	24	25	26	27	28	MARCH 2014  S M T W T F S  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31



ABOVE: "Bailey's Harbor Fences" by **PRISCILLA FARRELL** 1st Place — Lake Protection Activities

1st Place — Lake Protection Activities Bailey's Harbor, WI

Fencing at Village Harbor Beach near the Ridges Sanctuary protects recently planted beach grasses. The grasses act as a filtering system preventing bacteria from entering the lake during rainstorms.

-Priscilla Farrell

#### **Celebrate Fix a Leak Week**

The average household wastes more than 10,000 gallons of water every year through easy-to-fix leaks. That's enough water to wash nearly 10 months' worth of laundry! Fixing easily corrected household water leaks can save homeowners more than 10% on their water bills.

A leaky toilet can waste up to 200 gallons of water per day. That is a lot of money down the drain! Check your toilet for silent leaks:

- Put a few drops of food coloring into the tank of your toilet.
- Wait 15 minutes without flushing. If colored water appears in the bowl within 15 minutes, you have a leak.
- Make sure to flush the colored water as soon as the test is done.
   Food coloring can stain.

Be sure to also check for dripping faucets, showerheads and fixture connections. Check irrigation systems and outdoor spigots, too!

To learn more:

dnr.wi.gov (search Fix a Leak Week)
epa.gov/watersense/

Photo by Karen O'Hagar

## March 2014

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	FEBRUARY 2014  S M T W T F S  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28			S M T W T F S 1 2 3 4 5 1 2 3 4 5 1 12 13 14 15 16 17 18 19 2 2 21 22 23 24 25 26 2 27 28 29 30			hato by <b>Karin C. Frisque</b>
	2	3	4	5	6	7	8
	Daylight Savings Time Begins	10	11	12	13	14	15
jan	March 16-22 Fix a Leak Week Visit dnr.wi.gov (Search fix a leak week)	17	18	19	20 Spring Begins	21	22
	<ul><li>23</li><li>30</li></ul>	<ul><li>24</li><li>31</li></ul>	25 Soo Locks Open to Ships	26	27	28	29



ABOVE: "The Simple Things" by **RACHEL HODGES** 1st Place — People Enjoying Wisconsin's Great Lakes Cave Point County Park

### Blizzards, Hurricanes and Droughts, Oh My!

Toto, we're not in Kansas anymore! By mid-century Wisconsin's climate may be more like — well, not Kansas — but at least Illinois. Our climate is changing and scientists predict that the changes will accelerate over the next 40 years. They expect Wisconsin's annual average temperature to increase by 4-9 °F and storms to be more frequent and severe. While it is hard to tie a particular weather event to global warming, Hurricane Sandy or the severe drought of 2012 may provide a glimpse of things to come. We need to plan ways to adapt to these changes.

A changing climate will affect our businesses, recreation, traditions and health. To learn more, watch Climate Wisconsin videos at: **climatewisconsin.org** 

The Wisconsin Initiative on Climate Change Impacts (WICCI) is a partnership between the University of Wisconsin, DNR, and other state agencies and institutions. WICCI assesses and anticipates climate change impacts and recommends adaptations. Learn more at: www.wicci.wisc.edu/climatechange.php

Photo by **Leah Heinzen** 

# **April 2014**

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			Photo by <b>Lori Nett</b>	2	3	4	5
	6	7	8	9	10	11	12
p	13	Passover Begins at Sundown	15	16	17	18	19
en	20 Easter Sunday	21	Earth Day	23	24	25	26 Arbor Day
	27	28	29	30		**************************************	MAY 2014  S M T W T F S  1 2 3  4 5 6 7 8 9 10  11 12 13 14 15 16 17  18 19 20 21 22 23 24  25 26 27 28 29 30 31



ABOVE: "Windpower" by **LINDA KURTZ** 

2nd Place — Lake Protection Activities Green Bay, WI

Non-motorized recreation like sailing helps to protect our lakes. *-Linda Kurtz* 

#### So Many Beaches, So Little Time!

There's no need to travel thousands of miles to visit a great beach. Here are just a few of Wisconsin's ocean-like beach hot spots:

- North Beach in Racine selected by USA Today as one of 51 Great American Beaches and a Blue Wave certified beach, North Beach boasts 2,500 feet of sandy shoreline.
- Big Bay Beach on Madeline Island offers a lovely boardwalk and 2 miles of sandy beach.
- Schoolhouse Beach on Washington Island – a polished limestone pebble beach in a beautiful wooded setting.
- Kohler-Andrae in Sheboygan sand dunes and miles of golden beach, unique wetlands and rare plants.
- Neshota State Park Beach in Two Rivers – features several hundred yards of sand beach and extensive walking and bike trails.

Learn more at: www.travelwisconsin.com/ (search Beaches)

Free weather and beach water quality smart phone app (Android): **glin.net/beachcast/** 

Milwaukee River Keepers Swim Guide: www.mkeriverkeeper.org/content/swim-guide

# May 2014

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		S   M   T   W   T   F   S	JUNE 2014  S M T W T F S  1 2 3 4 5 6 7  8 9 10 11 12 13 14  15 16 17 18 19 20 21  22 23 24 25 26 27 28  29 30	1	2	3
4	5 Cinco de Mayo	6	7	8	9	10
Mother's Day	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26  Memorial Day	27	28	29	30	31



ABOVE: "Red Fox Stretching by the Lake" by **MARY LEE AGNEW**2nd Place — Natural Features & Widlife

## **June 2014**

## **Letter to Lake Michigan** by **Adrienne S. Wallner**

Lakeshore State Park

We don't need to talk. You always know why I need you. You comfort without speaking. You listen without hearing. I know you will always forgive me. When I wrap my arms around you your embrace surrounds and slows me, to the pace of sleep walking, lifting the heaviness until I am floating, concern sinking beyond my reach. Your appetite for my troubles is always ravenous; you swallow with each swell the weight of my worry replacing the hollow with currents of calm and comfort. You have rendered me unable to live beyond the reach of a strong shoreline, and incapable of inhabiting a landscape without water.

Thank you.

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
	1	2	3	4	5	6
	8	9	10	11	12	13
	15 Father's Day	16	17	18	19	20
THE PROPERTY OF THE PROPERTY OF THE PARTY OF	22	23	24	25	26	27  First of Ramadan Begins at Sundown
	29	30	A	MAY 2014 S M T W T F S 1 2 3	-/3	









**SATURDAY** 

Flag Day

Summer Begins

28



ABOVE: "Apostle Islands Sunset" by MICHAEL DEWITT

1st Place – Natural Features and Wildlife Ironwood Island, WI

#### **Blue-Green Algae**

Blue-green algae are photosynthetic bacteria, or cyanobacteria. Like other phytoplankton (microscopic algae), blue-greens are a natural part of the ecosystem. Other phytoplankton species can overgrow, but most common bluegreens are able to "bloom" if conditions are right and can form ugly scums at the lake surface. Blooms can be many colors other than blue-green, including green, red, white or brown.

Severe blooms can block light to other phytoplankton and lake plants. Decaying masses of blue-greens deplete oxygen important for lake critters and create a smelly mess for beach visitors. Many species of blue-greens can form toxins under some conditions. Toxins can be a health concern to people, pets or wildlife when ingested. In people, algal toxins can cause respiratory irritation and asthmalike symptoms, rashes and stomach upset. In dogs, the toxins can also cause convulsions and even death because dogs will freely drink lake water. People and their pets should avoid swimming in and boating through water that looks like "pea soup" or is scummy.

Learn more at:

dnr.wi.gov (search Blue Green Algae)

www.dhs.wisconsin.gov/eh/ bluegreenalgae/index.htm

Beach health: glin.net/beachcast/

Photo by Jeremy TePaske



# **July 2014**

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
s s e =	S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	L	Photo by <b>Deborah Grahek</b>	2	3	4 Independence Day	5
g	6	7	8	9	10	11	12
e ogs	13	14	15	16	17	18	19
ske	20	21	22	23	24	25	26
	27	28	29	30	Wisconsin State Fair Begins PICK UP YOUR 2013- 2014 GREAT LAKES CALENDAR! July 31-August 10		### AUGUST 2014  S M T W T F S  1 2  ### 10 11 12 13 14 15 16  17 18 19 20 21 22 23  24 25 26 27 28 29 30



ABOVE: "Tom Brings Them In" by **MARK STRAUB** 2nd Place — People Enjoying Wisconsin's Great Lakes Milwaukee, WI

#### **Harbor Towns**

Lake Michigan and Lake Superior add significant value to our state. They are the foundation of a \$3 billion per year tourism industry in lakeshore communities and Great Lakes harbors and marinas support a \$9.4 billion per year recreational boating industry.

The Wisconsin Harbor Town Association includes 18 harbor towns dotted along 1,100 miles of Great Lakes shoreline. From sophisticated cities to quaint fishing villages, Wisconsin's harbor towns offer a wealth of recreation and entertainment opportunities. You can sample Danish kringle in Racine, enjoy the Art Museum or Lakeshore State Park in Milwaukee, hike the sand dunes at Kohler-Andrae State Park. or tour a restored WWII submarine at the Maritime Museum in Manitowoc. Get out on the lakes and experience a ferry ride to Washington Island in Door County or from Bayfield to the Apostle Islands in Lake Superior. Wisconsin's harbor towns offer something for everyone!

To learn more:

www.travelwisconsin.com (search Harbor Town Tour)

Wisconsin Harbor Towns Association: wisconsinharbortowns.net

Photo by Stephen Schram



# August 2014

ı	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
CONTRACTOR OF THE CO.		S M T W T F S   1			SEPTEMBER 2014  S M T W T F S  1 2 3 4 5 6  7 8 9 10 11 12 13  14 15 16 17 18 19 20  21 22 23 24 25 26 27  22 29 30	Wisconsin State Fair Continues	2
	3	4	5	6	7	8	9
	10 Wisconsin State Fair Ends	11	12	13	14	15	16
STATE STATE STATE OF THE STATE	17	18	19	20	21	22	23
E	24	25	26	27	28	29	30
h.	31	•					



ABOVE: "Blustery Day at Anderson Barn" by MARK DAVID ZAHN

2nd Place — Cultural & Historic Features Ephraim, WI

Anderson Dock is listed on the National Register of Historic Places. The original warehouse (late 1850s) was destroyed by storm, the second was destroyed by fire in 1880, and this replacement has remained ever since.

Decades of boaters have painted their vessel's name and year of docking on the siding of the warehouse.

- Rachel Hodges

## Tai Chi Practitioners by Marilyn Zelke-Windau

Waves breathe in, breathe out.
They open, extend.
They push their power forward,
in blue reaching,
then shift their weight
to pull back.
Repeated again and again,
their flow in sustained movement,
lulls the lake,
balances the forces
without to within.

September 2014

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	M	Photo Dy Karen O'Hagan Tabor Day	2	3	4	5	6
	7	8	9	10	11	12	13
Section 1	14	15	16	17	18	19	20
t	21	22	23 Autumn Begins	Rosh Hashanah Begins at Sundown	25	26	27
の 一日 一日 一日 日本	28	29	30	*** AUGUST 2014  **S ** M ** T ** W ** T ** F ** S **			S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 5 16 17 18 5 18 20 21 22 23 24 25 6 27 28 29 30 31

Photo by Kathi Bennett



## October 2014

#### **Wisconsin's Paper Industry**

Wisconsin paper-making dates back 150 years to the days when paper was made from rags at a mill at the junction of the Milwaukee and Menomonee Rivers. In 1872, a new process was introduced to the Fox River Valley that allowed paper to be produced from wood pulp. Since paper production requires ample water, paper mills grew up along Great Lakes tributaries and other major rivers.

Today, Wisconsin's paper industry creates approximately 5.3 million tons of paper and 1.1 million tons of paperboard annually. More than 106,000 people are employed by pulp, paper and printing industries. Manufacturing jobs created in Wisconsin by the paper industry account for about 7% of our manufacturing workforce and include some of the state's highest paid jobs. Many of Wisconsin's paper mills have joined the DNR's Green Tier program which recognizes businesses committed to superior environmental performance.

Learn more at: **dnr.wi.gov** (search *Paper Sector*)

ı	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			SEPTEMBER 2014   S   M	1	2	Yom Kippur Begins at Sundown	4
	5	6	7	8	9	10	11
	12	13 Columbus Day	14	15	16	17	18 Clean Water Act Signed in 1972
STANDARD STANDARD	19	20	21	22	23	24	25
	26	27	28	Great Lakes Restoration Initiative Approved by Congress in 2009	30	31 Halloween	NOVEMBER 2014  S M T W T F S  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Photo by Rus Hur





## November 2014

#### **Transportation: Ferries**

Freight and passenger steamships have sailed Lake Michigan since 1875. The *Pere Marquette*, became the first steel hulled cross-lake ferry when it came into service in February 1897. The *SS Spartan* and *SS Badger*, launched in 1953 and 1955, ferried 205,000 passengers and 204,460 freight cars in 6,986 crossings of Lake Michigan. As the need for cargo transport declined, car ferry service waned and on November 16, 1990, the *S.S. Badger* set sail on its last trip.

In July 1991, entrepreneur Charles Conrad, purchased the *Badger, Spartan*, and *City of Midland* and brought the car ferry back into service. Today, five Great Lakes Ferry lines operate out of Wisconsin:

- SS Badger Manitowoc to Ludington, MI.
- Lake Express (high speed) Milwaukee to Muskegon, MI.
- Washington Island Ferry from the tip of Door County to Washington Island.
- Madeline Island Ferry Bayfield to Madeline Island.
- Apostle Islands Cruise Line shuttles passengers (no cars) on tours of the Apostle Islands or to individual islands.

Ferry lines: www.dot.wisconsin. gov/travel/water/ferries.htm

Ferry history: www.carferries.com or ssbadger.com

ı	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			Compared C			DECEMBER 2014	1
	Dayllight Savings Time Ends	3	4	5	6	7	8
	9	10	1 1 Veterans Day	12	13	14	15
STATE OF THE PROPERTY.	16	17	18	19	20	21	22
Part Carlo	23	24	25	26	27	28	29
38 C-20 (02 400)	30				Thanksgiving Day		



ABOVE: "Frozen Fish Tugs" by **RUS HURT** 2nd place – Wisconsin's Working Lakes Lake Superior

#### **Commercial and Sports Fishing**

Lake Michigan and Lake Superior once supported large commercial fisheries. Species caught included lake trout, perch, sturgeon, lake herring, whitefish and chubs. Whitefish were (and still are) prized for their delicate flavor. By 1900, commercial fishermen were bringing in 41 million pounds of fish a year. Eventually, overfishing took its toll, pollution and habitat loss stressed the lake ecosystem, and invasive species, like alewife and sea lamprey decimated some Great Lakes fish populations.

Today's commercial fishery is smaller, but still important, harvesting mainly whitefish, lake herring, and lake trout from Lake Superior and whitefish from Lake Michigan. And through the introduction of chinook and coho salmon to keep alewife in check, a popular sports fishery was born. Visitors can find charter fishing tours in most Wisconsin harbor towns and can enjoy the excitement of catching large game fish including steelhead, coho and chinook salmon, lake trout, and brown trout. Musky, perch, walleye and smallmouth bass are popular in certain areas as well.

#### Learn more at:

**dnr.wi.gov** (search *Fishing Lake Michigan or Lake Superior*)

www.great-lakes.net/teach/envt/ fish/fish\_2.html www.wisconsinhistory.org (search Fishing Industry)

stateofthecoast.noaa.gov/com\_ fishing/welcome.html

www.wistravel.com

(search Charter Fishing)

# December 2014

ı	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		thoto by <b>Faye Germain</b>	2	3	4	5	6
	7	Great Lakes	9	10	11	Great Lakes Restoration Strategy Released in 2005	Great Lakes Compact Signed by Governors in 2005
ł		Compact Enacted in 2008	4.0	4 =	4.0	Released in 2005	Governors in 2005
A STATE OF THE PARTY OF THE PAR	14	15	16  Hanukkah Begins at Sundown	17	18	19	20
S C C TO MINING SECTION	21 Winter Begins	22	23	24	25 Christmas Day	26 Kwanzaa Begins	27
	28	29	30	31  New Year's Eve	NOVEMBER 2014  S M T W T F S  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	men.	JANUARY 2015 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 25 26 27 28 29 30 31

"The ultimate test of a man's conscience may be his willingness to sacrifice something today for future generations whose words of thanks will not be heard."

#### **GAYLORD NELSON**

former Wisconsin governor and co-founder of Earth Day





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Wisconsin Department of Natural Resources Office of the Great Lakes 101 S. Webster St. Madison, WI 53707-7921

Printed on Recycled Paper PUB WT-985-2013

For more information, visit: http://dnr.wi.gov (search Great Lakes)